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Technical Report No. LWL-CR-05B72

PORTABLE DOG KENNEL

Final Report

by
Clyde S. Barnhart, Sr.
Biological Sciences Branch

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U. S. ARMY LAND WARFARE LABORATORY

Aberdeen Proving Ground, Maryland 21005

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ABSTRACT

A portable dog kennel of new design is described. It is compactly folded for shipment or storage. All components are attached so that it is virtually one piece. It can be erected by one man without tools in about a minute. It has a dual purpose, shelter for a military dog and a quarantine facility for a dog suspected of being rabid.

FOREWORD

The development of this dog kennel was done in response to a need involving the use of dogs in military operations. Temporary shelters are often improvised from oil drums, shipping crates, or culvert components, until permanent construction can be provided.

When called upon to move, all shelters are usually abandoned and others improvised in the new location.

Where operations involving sentry dog/scout dog units utilize only temporary base camps, it is often impractical to construct permanent or even semi-permanent housing for the dogs. It is believed that the LWL portable dog kennel represents a significant breakthrough in kennel concepts and design.

The kennels were built by the Technical Support Division, U. S. Army Land Warfare Laboratory.

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INTRODUCTION

In military operations involving the use of sentry/scout dogs provision is needed for their continued care and maintenance. Shelters can be improvised from oil drums, shipping crates, culvert components, or may be of permanent construction. When called upon to move on short notice, dog shelters are often abandoned even if they are of permanent construction, have to be improvised or built permanently at the new location.

In indigenous dog populations, rabies in young dogs is not uncommon. Portable quarantine facilities for these animals are needed by veterinary units. The suspect rabid animal needs to be isolated from direct contact with other dogs and people.

Commercial versions of dog kennels, shipping crates and permanent structures were considered but they lacked portability, foldability, and speed and ease with which they could be erected. The portable dog kennel was developed to fulfill the peculiar need of the military dog in operational use, especially that of frequent relocation.

A total of sixteen (16) kennels was fabricated. Tests were performed in Southeast Asia, at Fort Gordon, Georgia, and at Fort Belvoir, Virginia.

DESCRIPTION OF EQUIPMENT

The USALWL prototype portable dog kennel is designed to fulfill two functions. First of all it is intended as a suitable portable shelter for a military dog. Secondly, it can serve as a portable quarantine facility for a dog suspected of being rabid.

The portable dog kennel is designed so that virtually all parts are attached permanently to the unit. This precludes the use of loose parts which are easily lost. The roof panels serve to inclose all other parts when the kennel is folded. The dog kennel serves as its own shipping container in the folded configuration.

The portable dog kennel can be taken down for transport or set up for use in a few minutes and without tools.

If the kennel is to be used on a paved surface, it can be secured in place by a few sand bags piled against its sides.

If the kennel is to be used in a semi-permanent or permanent location, it may be desired to mount it on a wooden post or on a tree stump. The kennel is provided with a gripping plate under the center of the floor panel. This plate supports the weight of the kennel on a stump or post.

Two braces hinge down from the front of the floor and are held to the base of the stump or post by a chain clamping device. Tests have shown that about 18 inches is a suitable height for the stump or post and that the stump or post must be sawed off reasonably level. A 6-inch to 10-inch diameter stump or post is suitable. A steel ring and a 15-foot dog chain are furnished with each kennel. These are the only parts not attached to the kennel.

When a stump or post is used as a pedestal on which to mount the kennel, the steel ring is placed over the stump before mounting the kennel. This serves as the attachment for the dog chain.

The roof panels of the kennel are of aluminum foam sandwich construction, which provides insulation.

The covering on the floor is of polypropylene fiber. It will not support the growth of biological organisms. It can be sanitized with soap and water. It is secured to the floor by cement and metal edge strips.

In order to use a LWL portable kennel as a confinement facility for a suspect rabid dog, the back storm door and the two front screen doors are closed and locked. These doors when closed preclude animal-to-animal contact and/or contact with the confined dog by unwary persons. The confined dog can be given food and water through the access space at the bottom of the inner screen door by opening only the outer screen door. The kennel can be flushed with water without removing the dog.

RESULTS

The portable dog kennels were tested in RVN by the 18th Military Police Brigade. They experienced no difficulty in setting them up or folding them for moves. They observed that the sides were effectively insulated against the heat and that the floor covering was easily cleaned with water. One large dog broke down the door during artillery fire. They lost their kennels, however, during a move, and requested replacements with stronger catches and two feet higher and 2-1/2 feet longer than the original size.

Tests at the USA Military Police School, Fort Gordon, Georgia, Canine Training Group found the kennels to be somewhat small for a large German Shepherd. They too found the catches to be troublesome. They experienced difficulty in getting the dogs to accept the kennels. The kennels probably somewhat resembled shipping crates from the point of view of the dogs. One German Shepherd violently resisted being placed in the kennel.

Tests at Fort Benning, Georgia, by the Military Dog Committee, USAIS, were virtually negative. Three kennels were used but the dogs preferred to sleep outside. The weather was not unfavorable, however, and the dogs were under no particular stress due to the weather.

Tests at Fort Belvoir, Virginia, were conducted by the Countermining/Counter-Intrusion Department, USAMERDC. The three kennels used worked fine and were used by the dogs. The dogs were tied near the kennel and had freedom to use the kennel or not. Several times the dog inadvertently released the catch holding the front door open and the door would close, trapping the dog inside. Whenever this happened, the dog would be visibly shaken.

DISCUSSION

The portable dog kennel seemed ideally suited for the purposes for which intended from the point of view of logistics and the dog handlers. It was quickly erected and folded, lightweight, simple to use and a reasonable compromise between ruggedness and lightness of weight. The only mechanical difficulty was with the sliding bolt catches. A better system needs to be devised.

It was believed that a somewhat larger kennel is needed for the larger German Shepherd dogs.

The stump-mounting feature was never needed or used by those testing the kennel. It could perhaps be omitted.

The rabid dog confinement feature likewise was not tested or used during the conduct of the tests.

If this kennel is to be used in cold climates, a change to a wall material such as plywood, and a windbreak on the front, would be needed.

APPENDIX A
Portable Dog Kennel
Data List of Engineering Drawings*

<u>Dwg No.</u>	<u>Nomenclature</u>
090030000	Dog Kennel, Portable, Assy
090030001	Side Panel Assy, Right
090030002	Side Panel Assy, Left
090030003	Floor Assy
090030004	Side Panel, Right
090030005	Side Panel, Left
090030006	Center Floor Plate
090030007	Front Door
090030008	Inner Door
090030009	Rear Panel
090030010	Shield
090030011	Panel Hinge
090030012	Door Holder
090030013	Panel Trap
090030014	Door Hinge
090030015	Runner
090030016	Peak Cover
090030017	Panel Hinge
090030018	Post Tie Rod
090030019	Shield Holder
090030020	Post Clamp
090030021	Floor Side Hinge
090030022	Corner Gusset
090030023	Floor Hinge
090030024	Floor Panel Hinge
090030025	Panel Edge
090030026	Grip Plate
090030027	Floor Frame
090030028	Chain Retainer
090030029	Post Band
090030030	Chain Hook
090030031	Plate
090030032	Clamp Assy
090030033	Side Panel & Door Assy, Right
090030034	Side Panel & Door Assy, Left
090030035	Ring
090030036	Barrel Bolt, Modified

*Drawings will be made available on request to Dr. Clyde S. Barnhart,
U. S. Army Land Warfare Laboratory, Aberdeen Proving Ground, Md. 21005.

APPENDIX B
Figures

<u>No.</u>	<u>Title</u>
1	Kennel Folded for Transport or Storage
2	Back Screen Door Panel Being Set in Position. Bottom of Kennel Showing Stump Gripping Plate, Braces and Clamping Device in Stowed Position
3	Floor Anchor Bolts in Locked Position
4	Front Screen Doors and Back Storm Door Folded Inward and Out of the Way
5	Kennel Being Perched on a Stump
6	Braces Hinged Down from Floor to Stump. Ring in Place with Dog Chain Attached
7	Chain Clamping Device Holding Braces Securely to Stump
8	All Doors Closed for Rabid Dog Confinement
9	Outer Front Screen Door Open, Inner Screen Door Secured Showing Opening at Bottom for Feeding and Watering Rabid Dog

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FIGURE 1. Kennel Folded for Transport or Storage.



FIGURE 2. Back Screen Door Panel Being Set in Position. Bottom of Kennel Showing Stump Gripping Plate, Braces and Clamping Device in Stowed Position.



FIGURE 3. Floor Anchor Bolts in Locked Position.

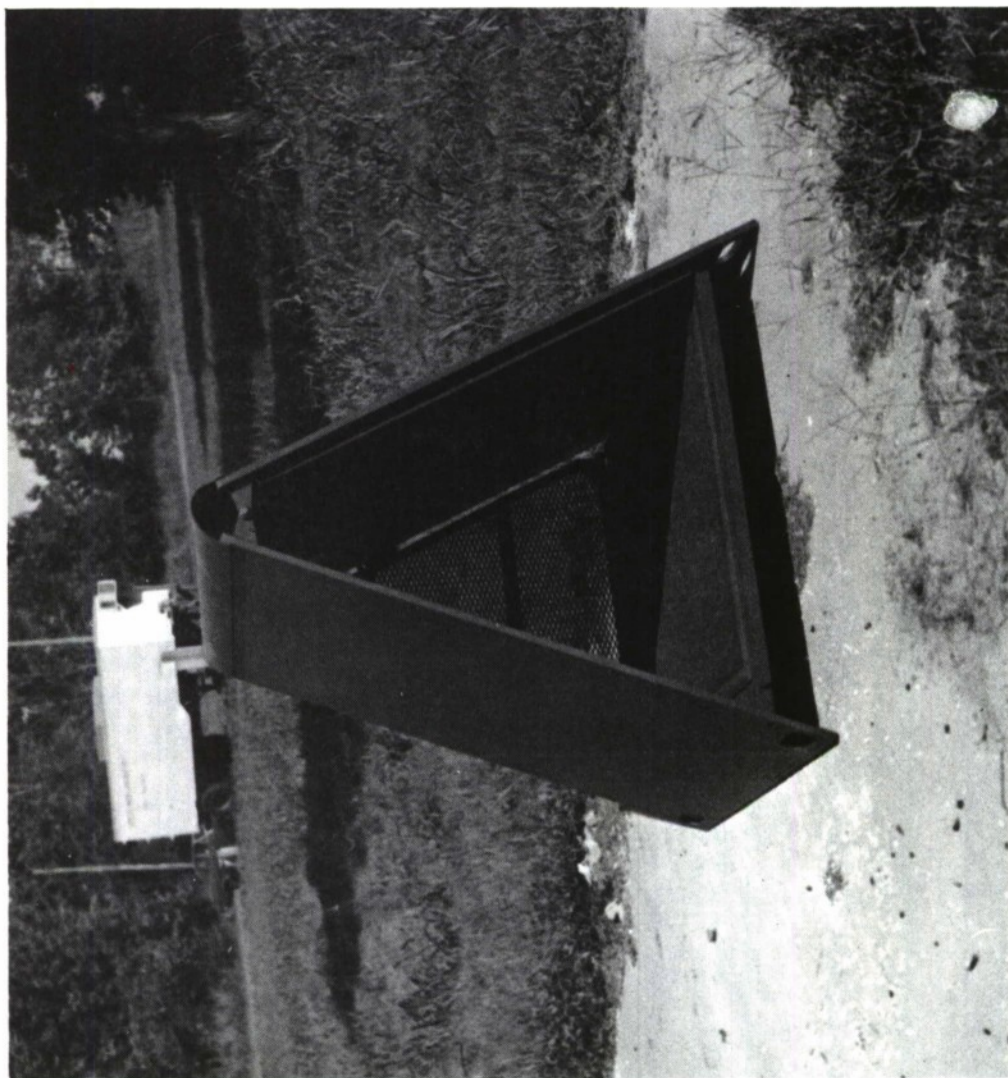


FIGURE 4. Front Screen Doors and Back Storm Door Folded Inward and Out of the Way.



FIGURE 5. Kennel Being Perched on a Stump.

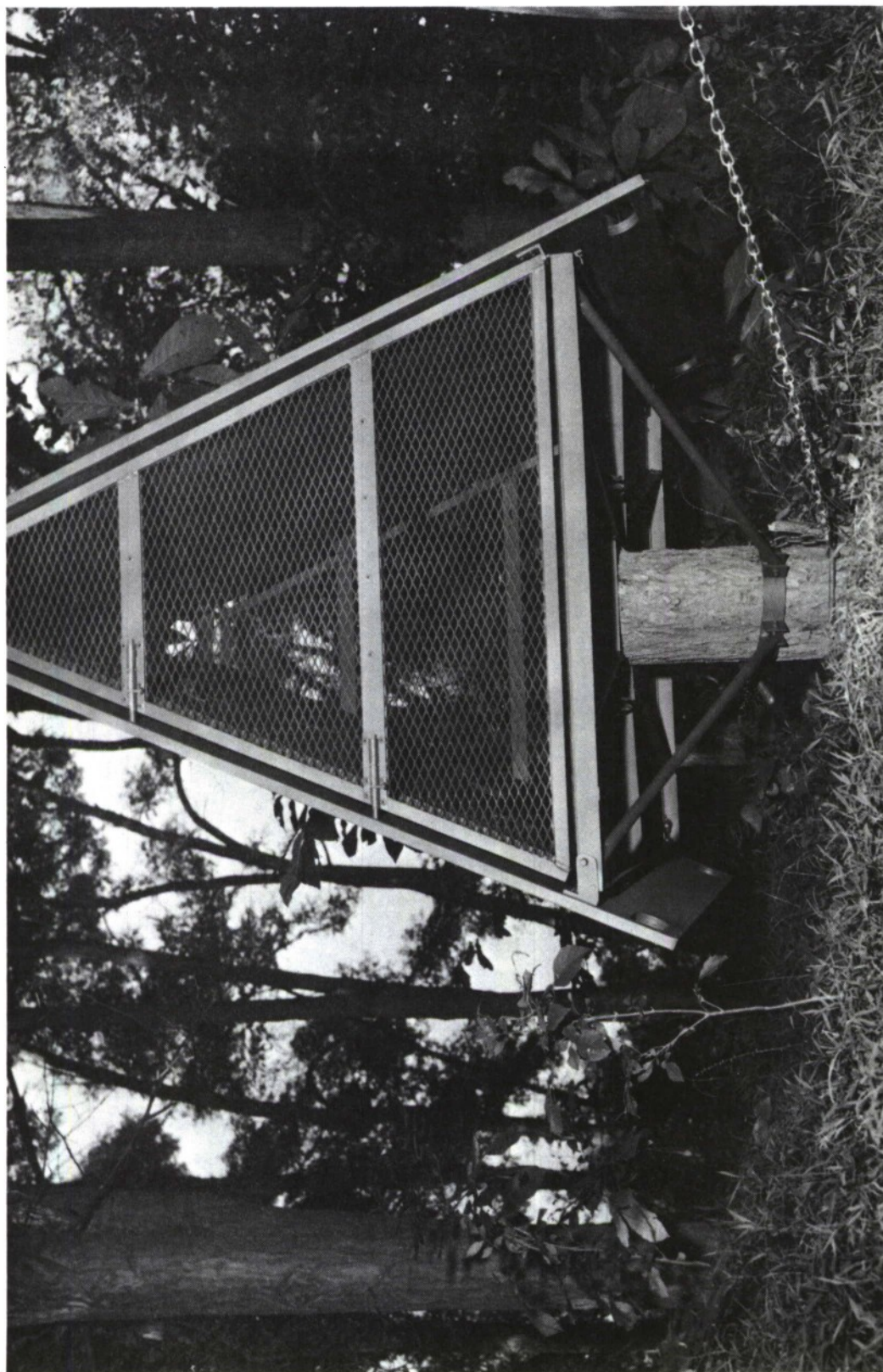


FIGURE 6. Braces Hinged Down from Floor to Stump. Ring in Place with Dog Chain Attached.

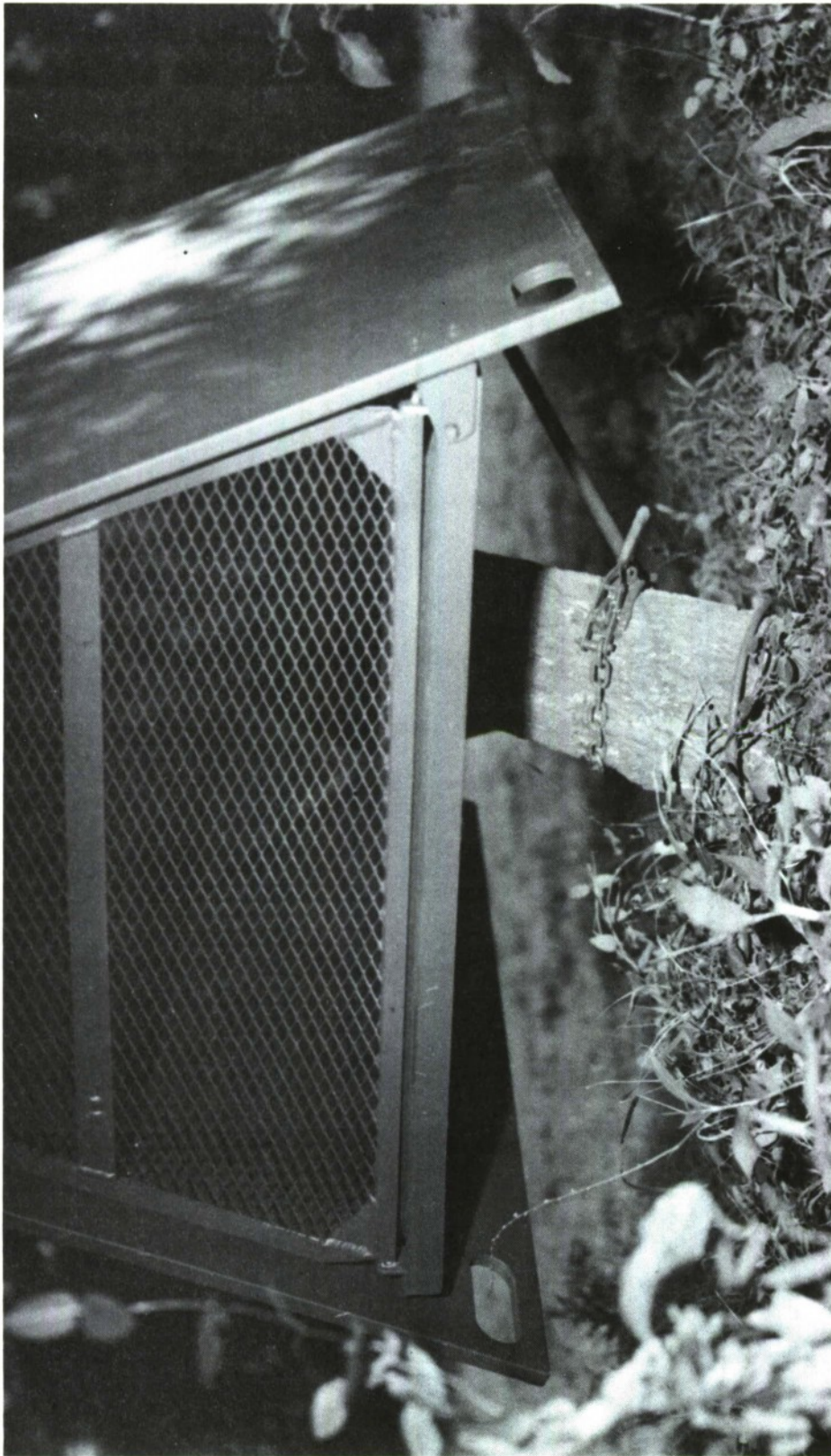


FIGURE 7. Chain Clamping Device Holding Braces Securely to Stump.



FIGURE 8. All Doors Closed for Rabid Dog Confinement.



FIGURE 9. Outer Front Screen Door Open, Inner Screen Door Secured
Showing Opening at Bottom for Feeding and Watering Rabid Dog.

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